

REMARKS

In the Office Action, the Examiner rejected claims 1-23. By this paper, Applicants have amended claims 3, 7, 12, and 21-23. These amendments do not add any new matter and support for the amendments may be found in at least paragraphs 55 and 60 of the originally filed specification. Upon entry of these amendments, claims 1-23 will remain pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration and allowance of all pending claims.

Claim Objections

Applicant thanks the Examiner for pointing out the clerical error regarding the dependence of claim 7. Claim 7 has been amended to correct the error and it is believed that this amendment obviates the Examiner's objection.

Claim Rejections under 35 U.S.C. § 101

In the Office Action, the Examiner rejected claim 22 under 35 U.S.C. § 101, because the claimed invention is directed to non-statutory subject matter. In particular, the Examiner stated:

The claimed invention is directed to non-statutory subject matter. Claim 22 is to a computer program. While computer programs are not patentable, a computer readable medium can be claimed, appropriate correction is required.

Office Action, page 2.

Applicants respectfully assert that claims 22 and 23, as amended, are directed to statutory subject matter under Section 101, as they recite discrete physical structure, e.g. a tangible computer-readable medium. Computer programs have been directly held by the Federal Circuit to be patentable under Section 101 when recited to be stored in a tangible medium. *See In re Beauregard*, 53 F.3d 1583 (Fed Cir. 1995). Indeed, the Commissioner of Patents is quoted in the *Beauregard* case as stating that, “[C]omputer programs embodied in a tangible medium... are patentable subject matter under 35 U.S.C. §101.” *Id.* Accordingly, because independent claim 22 recites, *inter alia*, “computer program stored on a tangible computer-readable medium,” (emphasis added), Applicants assert that claim 22 is directed to patentable subject matter under 35 U.S.C. §101. Indeed, the amendments conform with both the relevant case law cited above and the suggested claim language set forth by the Examiner. As such, Applicants respectfully request the withdrawal of the currently applied Section 101 rejection.

Claim Rejection Under 35 U.S.C. § 112, Second Paragraph

In the Office Action, the Examiner rejected claims 3, 4, 12, 13 and 21 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Examiner stated:

Claims 3, 12, 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant uses the terms center probability bin and increasing variances from the center probability bin. However, in paragraph 0059 of the specification, variance appears to be described as the difference between upper and

lower points in a bin. In the claims (ex 3, 12, 21, applicant uses variance to define increasing variances from a center probability. It is not clear to the examiner which variance is being called for as, variance within the bin, or variance of the data or range (as per examples) and if so, how would this changing variance would be determined by one of ordinary skill in the art. (process is described). Likewise, applicant uses a difference in the bin as a variance where as, this would be commonly called a range. Further, the applicant seems to imply that this width of the bins widens as we go further from the center but, the claim can easily be interpreted to be defining the bins to be of increasing variance (standard term), implying a formula (variance formula) which would indicate where or the size of the claimed bin or distance from the center. However, applicant does not clearly indicate how this "range" (variance) is devised nor do they clearly explain how to create this and would it be linear or exponential or random widening?

Claims 4, 13, further claim a mean estimate as the center probability bin. However, the application is somewhat unclear as to the meaning when paragraph 0056 defines it to be recent revenue information or a "simple guess". Revenue information does not enable the concept nor does simple guess. Appropriate definition or claim amendment is required.

Office Action, pages 3-4.

Applicants respectfully traverse this rejection. The Examiner's focus during examination of claims for compliance with the requirement for definiteness under 35 U.S.C. § 112, second paragraph, is whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. *See* M.P.E.P. § 2173.02. The Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. *See* M.P.E.P. §§ 2173.01 and 2173.05; *In re Swinehart*, 160 U.S.P.Q. 226, (C.C.P.A. 1971). The Examiner is also

reminded not to equate breadth of a claim with indefiniteness. *In re Miller*, 441 F.2d 689, 169 U.S.P.Q 597 (C.C.P.A. 1971).

The essential inquiry pertaining to the definiteness requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. *See M.P.E.P. § 2173.02*. As set forth in Section 2173 of the Manual of Patent Examining Procedure, definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

In reviewing a claim for compliance with 35 U.S.C. § 112, second paragraph, the Examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. § 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. *See Solomon v. Kimberly-Clark Corp.*, 55 U.S.P.Q.2d 1279, 1283 (Fed. Cir. 2000). Only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction must it be declared indefinite. *See Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 71 U.S.P.Q.2d 1081, 1089 (Fed. Cir. 2004). Accordingly, a claim term that is not used or defined in the specification is not indefinite if the meaning of the claim term is discernible. *See Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 69 U.S.P.Q.2d 1996, 1999-2000 (Fed. Cir. 2004).

In other words, a claim is not to be presumed indefinite merely because the claim includes a broad term. If the scope of the subject matter embraced by the claims is clear, and if Applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph. *See M.P.E.P. § 2173.04.*

Claims 3, 12, and 21 have been amended to more clearly and distinctly point out and claim the subject matter which Applicants regard as their invention. Specifically, claims 3, 12, and 21 have been amended to more clearly describe the variance of each of the bins as increasing in proportion to their respective distance from the center bin. An example of this is illustrated in FIG. 6 of the present application, where the bins nearest the center have a variance of 7.2, while the bins that are further from the center have a variance of 7.3, 12.5, 13.1, etc.

While Applicants believe the present amendments to claims 3, 12, and 21 address the Examiner's concerns, Applicants remind the Examiner that, as set forth in Section 2173.02 of the M.P.E.P., definiteness of claim language must be analyzed in light of the content of the application disclosure and with respect to the claim interpretation that would be given by one of ordinary skill in the art at the time of the invention. The Examiner has not addressed the fact that one of ordinary skill in the art, upon reading the originally filed specification (specifically FIG. 6 and paragraph 55), would have understood that bins further from the center have a larger variance than bins near the center.

As to the Examiner's contention that creation of the variance is not clearly explained, Applicants direct the Examiner to the last sentence of paragraph 55 of the originally filed specification. In this section, Applicants provide an example intended to be used as a guide for Section 112 purposes. By including larger variances further from the center, persons may be motivated to select a given bin. For example, in FIG. 6, the bin furthest to the left includes all values from \$0 - \$1009.1m, while a bin near the center includes only the values \$1078.8 - \$1086.0m. In attempting to select the correct bin, a trader may only wish to select an outside bin if there are a large amount of values in that bin, e.g. from \$0 - \$1009.1m. Contrast this with the \$1078.8 - \$1086.0m bin, near the center (center representing most likely outcomes on the graph), where a trader will not require a large amount of values in the bin because the bin already covers highly likely outcomes. Thus, as the Examiner points out, staggering the bin variance values may, for example, be accomplished through a linear, exponential, or random manner, or by other known techniques.

Indeed, the claim is broad enough to encompass *any system* for choosing bins variance values, as long as the bin variance values are larger as the bins increase in distance from the center. The Examiner is reminded that the test for indefiniteness under Section 112 is not whether the claim terms may be broad, but whether they are unable to be discerned. Clearly, bins near the center having smaller variances than bins further from the center is understandable to one possessing the ordinary level of skill in the pertinent art at the time the invention was made. Thus, the rejection of claims 3, 12, and 21 is improper and Applicants respectfully request the removal of the Section 112 rejection of claims 3, 12, and 21.

The Examiner further rejected claims 4 and 13 under Section 112 under indefiniteness grounds. The Examiner correctly pointed out that the originally filed specification lists at least two examples of how to derive a mean estimate (or official estimate) as a center of the bins, either calculated from the latest revenue information or by a guess. *See Specification, paragraph 52.* The mean estimate is described, for example, as merely a starting point around which the variance of the remaining bins may be calculated in a manner to elicit “bets” or “trades” from participants in the forecasting. *See id.* For example, if a company had a revenue stream of one million dollars in the previous month, choosing one million dollars as the mean estimate for this month would be reasonable, based on the teachings in the specification. Similarly, if a company had a revenue stream of one million dollars in the previous month, however a new competing product was released this month, choosing one half million dollars as the mean estimate for the month would be reasonable, based on the teachings in the specification. Again, the Examiner is reminded that the test for indefiniteness under Section 112 is not whether the claim terms may be broad, but whether they are unable to be discerned. Clearly, choosing a starting point as a mean estimate based, for example, on the latest revenue information is understandable to one possessing the ordinary level of skill in the pertinent art at the time the invention was made. Thus, the rejection of claims 4 and 13 is improper and Applicants respectfully request the removal of the Section 112 rejection of claims 4 and 13.

Claim Rejections under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected claims 1-7, 9-16, and 18-23 under 35 U.S.C. § 103(a) as unpatentable over Geiger, U.S. Patent No. 6,2363,900 (hereinafter “the Geiger reference”), in view of Horrigan et al., U.S. Patent No. 6,493,682 (hereinafter “the

Horigan reference"). The Examiner further rejected claims 8 and 17 as being unpatentable under 35 U.S.C. § 103(a) over the Geiger reference in view of the Horigan reference and in further view of Jennings et al., U.S. Patent No. 6,606,615 (hereinafter "the Jennings reference"). Specifically, with regard to independent claims 1, 10 and 22, the Examiner stated in relevant part:

Claim 1, 10 and 22

Geiger discloses determining at least one participant characteristic of a participant; (Col. 2, line 5-10), Geiger discloses a query process and probabilities. (Col. 3, line 19-23)
aggregating a result of the query process with weighting for the participant characteristics. (Col. 4, line 11-17 and 45-63).

Geiger does not specifically disclose defining probability bins and that each probability bin corresponding to a probability is associated with an expected outcome (probabilities are disclosed). Geiger does also not specifically associate performing a query process with probability bins.

Horigan teaches defining probability bins, (col. 22 line 60-5), Further, Horigan teaches that each of the probability bins corresponding to a probability associated with an expected outcome; (Col 60-5, Col. 22)
and probability bins in conjunction with assets (Col 5, line 50).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to combine the forecasting methods and disclosures which can work for assets or gaming with the probability bin and predictive teachings of Horigan for the purpose of predicting asset values using probability bins to differentiate values which are continuous.

Office Action, pages 4-5.

Applicants respectfully traverse this rejection. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, it is not enough to show that all the elements exist in the prior art since a claimed invention composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). It is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Specifically, there must be some articulated reasoning with a rational underpinning to support a conclusion of obviousness; a conclusory statement will not suffice. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Indeed, the factual inquiry determining whether to combine references must be thorough and searching, and it must be based on *objective evidence of record*. *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002).

The Geiger and Horrigan references, whether considered separately or in a hypothetical combination, fail to anticipate all elements of independent claims 1, 10, and 22. For example, Independent claim 1 recites, *inter alia*, “determining at least one participant characteristic of a participant; defining probability bins... performing a query process *with the probability bins as assets*; and *aggregating a result of the query process* with weighting for the participant characteristic.” (Emphasis added). Similarly, independent claim 10 recites, *inter alia*, “a characteristic determination module that determines at least one participant characteristic of a participant; a probability bin module... a query module that performs a query

process *with the probability bins as assets*; and an aggregation module that *aggregates a result of the query process with weighting for the participant characteristic.*" (Emphasis added). Finally, independent claim 22 recites, *inter alia*, "the characteristic determination module adapted to determine at least one participant characteristic of a participant; a probability bin module... the query module adapted to perform a query process *with the probability bins as assets*; and... the aggregation module adapted to aggregate a result of the query process with weighting for the participant characteristic." (Emphasis added).

The Horrigan reference fails to teach performing a query process *with the probability bins as assets*. The Examiner has not even attempted to specifically reject this limitation. Rather, the Examiner merely stated that the Horrigan reference teaches "probability bins in conjunction with assets." *See Office Action, page 5.* Even if the Examiner was correct in the assertion that the Horrigan reference teaches probability bins in conjunction with assets, probability bins in conjunction with assets is not the same as performing a query process *with the probability bins as assets*.

Moreover, the one line of the Horrigan reference cited by the Examiner in support of "probability bins in conjunction with assets", Col. 5, line 50, does not even address bins at all, let alone performing a query process *with the probability bins as assets*. Indeed, the section of the Horrigan reference cited by the Examiner is reproduced in whole below:

If a principal order is placed, we assume it is executed at the start of the trade period at time t, at the current principal price. At the end of the trade period, at time t+1, performance is evaluated based on a terminal valuation price.

Horrigan, col. 5, lines 49-53.

As can be seen above, this section is totally devoid of any teaching of a query process, bins as assets, or performing a query process *with the probability bins as assets*. As such, it is unclear why the Examiner has determined that this section teaches performing a query process *with the probability bins as assets*. This section, as well as the remainder of the Horrigan reference, clearly does not teach the above recited claim limitations of independent claims 1, 10, and 22. Further, the Geiger reference does not remedy the deficiency of the Horrigan reference. Indeed, the Examiner did not even make such a suggestion.

Furthermore, contrary to the Examiner's position, the Geiger reference fails to teach *aggregating a result of the query process*, as recited in independent claims 1, 10, and 22. The Examiner explicitly admits that the Geiger reference does not associate performing a query process with probability bins. *See Office Action, page 5.* Yet, despite the fact that the Geiger reference does not teach performing a query process with the probability bins, the Examiner asserts that the Geiger reference aggregates a result of this very process which was just admitted to not be present. The Examiner has given no direction as to how the Geiger reference, silent as to performing the recited query process, may then *aggregate that same process.*

Indeed, the cited sections of the Geiger reference (Col. 4, lines 11-17 and 45-63) do not disclose aggregating *the result of the query process*. Instead, the cited portions, at best, merely disclose aggregation of the result of *one or more events*, namely did a participant correctly guess an event outcome. Unlike aggregating the result of the query process, aggregating the result of events must necessarily occur *after* the events have transpired. The

teachings of the Geiger reference related to aggregation of the result of *one or more events* do not teach aggregating the result of the *query process*.

As such, none of the cited references, taken alone or in hypothetical combination disclose all of the features of independent claims 1, 10, or 22. It should be noted that the Examiner did not address the subject matter of independent claims 10 or 22, as set forth above, with any specificity. Indeed, in the Office Action, the Examiner essentially failed to address any distinctions between claims 1, 10, and 22. While the Applicant does not agree with the Examiner addressing these claims together, insomuch as the Examiner's rejection is identical on all of these claims, claims 10 and 22 are believed to be equally patentable for the reasons summarized above with respect to claim 1.

It should also be noted that independent claim 19 was not specifically addressed by the Examiner. However, independent claim 19 is believed to be allowable for similar reasons to those set forth above regarding the allowability of claim 1. Accordingly, since the prior art of record fails to disclose all elements of independent claims 1, 10, 19, and 22, Applicants assert that independent claims 1, 10, 19, and 22, as well as all claims depending therefrom are allowable. As such, Applicants respectfully request withdrawal of the rejection of claims 1-23.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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